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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,670	12/30/2005	Neil C Bruce	13571-00001-US	3472

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EXAMINER

LILLING, HERBERT J

ART UNIT	PAPER NUMBER
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1657

MAIL DATE	DELIVERY MODE
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01/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/541,670

Applicant(s)

BRUCE ET AL.

Examiner

HERBERT J. LILLING

Art Unit

1657

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-30 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Receipt is acknowledged of a preliminary amendment filed July 07, 2005 and two prior art disclosure statement filed March 30, 2006 and November 27, 2007 for this application which is a 371 of PCT/GR04/00014 filed January 07, 2004 which application claims benefit to United Kingdom 0300595.6 filed January 07, 2004.

2. Claims 1-30 are pending in this application.

3. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 1-11 and 28, drawn to a method of carrying out an enzyme-catalyzed reaction comprising providing a liquid reaction medium which comprises an ionic liquid including an ion which comprises a functional group selected from the group consisting of alkenyl, hydroxyl, amino, thio, carbonyl and carboxyl groups, providing in the liquid reaction medium an enzyme and a substrate for the enzyme, and allowing reaction of the substrate to occur, which Group cannot be classified properly due to claimed functional language.

Group II, claims 12-19 and 29, drawn to a method of carrying out a cofactor-dependent enzyme-catalyzed reaction comprising providing a liquid reaction medium which comprises an ionic liquid and less than 5% water, providing in the liquid reaction medium a cofactor-dependent enzyme and the cofactor, providing in the liquid reaction medium a substrate for the enzyme and allowing reaction of the substrate to occur, which Group cannot be classified properly due to claimed functional language.

Group III, claims 20-24, drawn to a composition comprising an ionic liquid including an ion which comprises a functional group selected from the group consisting of alkenyl, hydroxyl, amino, thio, carbonyl and carboxyl groups and an enzyme, which Group cannot be classified properly due to claimed functional language.

Group IV, claims 25, drawn to a composition comprising an ionic liquid including an ion which comprises a functional group selected from the group consisting of alkenyl, hydroxyl, amino, thio, carbonyl and carboxyl groups and a substrate for the enzyme, which Group cannot be classified properly due to claimed functional language.

Group V, claim 26, drawn to a composition comprising an ionic liquid including an ion which comprises a functional group selected from the group consisting of alkenyl, hydroxyl, amino, thio, carbonyl and carboxyl groups, a substrate for the enzyme and a cofactor for the enzyme, which Group cannot be classified properly due to claimed functional language.

4. The inventions are independent or distinct, each from the other because:

Invention I does not require the specifics of Invention II.

Invention III does not require the specifics of Inventions IV/V

Invention.

Invention III [product composition] does not require the specifics of Invention I [method].

Invention IV does not require the specifics of Invention V.

Inventions III-V and V are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h).

Furthermore, the art of record based on the PCT clearly indicates that groups of inventions are not so linked as to form a single general inventive concept under PCT Rule 13.1.

Because these inventions are independent or distinct for the reasons given above and there **would be a serious burden on the examiner if restriction is not required** because the inventions have acquired a separate status in the art due to their recognized divergent subject matter which requires a separate computerized search which search based on the current claims cannot be properly made due to the functional language for the claimed:

- a) enzyme(s); several hundred thousand hits on West [see West Search];
- b) substrate or substrates: over two and one half million which number would be far higher if included any number of thousands of substrate(s) which language lacks the word substrate or substrates for any possible art
- c) the expression "ionic liquid" which scope is not definitely defined as to the structure of the compound(s);

Due to the three variables not sufficiently defined in the specification, the instant specification may be considered to be fatally defective to support the claimed language.

5. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

A Whereby an ionic liquid including an ion which comprises a functional group selected from the group consisting of:

- a) alkenyl,
- b) hydroxyl,
- c) amino,
- d) thio,
- e) carbonyl,
- f) carboxyl,
- g) combination of any above-please specify the combination.

B. Whereby the ionic liquid comprises:

- i) an anion ,
- ii) a cation ,
- iii) zwitterion;
- iv) other-please specify.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected

species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The following claim(s) are generic: 1,12, 20, 25 and 26, .

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: each of the functional groups requires a separate search as well as each of the functional groups as well as each of the ionic species would be drawn to different compounds which would require separate computerized searches.

6. Applicant is advised that the reply to this requirement to be complete **must include** (i) an election of a species and an invention to be examined even though the requirement be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected invention.**

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103 (a) of the other invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

8. In accordance with this Tech Center Policy based on above restriction containing product claims and process claims, this Examiner will rejoin any non-elected process claims upon the election of a product claim which is subsequently is found allowable in view of the following guidelines:

F.P.: Ochiai/Brouwer Rejoinder form paragraph

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are

governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai*, *In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.**

Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

9. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HERBERT J. LILLING whose telephone number is 571-272-0918. The examiner can normally be reached on WORK AT HOME MAXIFLEX.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JON WEBER can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10/541,670

Art Unit: 1657

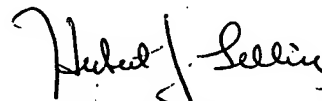
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H.J.Lilling: HJL

(571) 272-0918

Art Unit 1657

January 28, 2008



Dr. HERBERT J LILLING

Primary Examiner

Group 1600

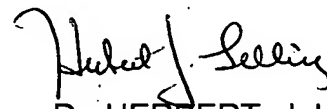
Art Unit 1657

Application/Control Number:
10/541,670
Art Unit: 1657

Page 9

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January 28, 2008



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